

Greetings Spring Lake Residents!

Please find the latest bioassessment of your lake below. Key highlights of this update include:

- Submersed Aquatic Vegetation (SAV)
- Shoreline emergent vegetation and its benefits
- Invasive emergent vegetation
- Recommendations for you and your lake

**Bioassessments:**

**3/1/2016**

On **March 1<sup>st</sup>, 2016**, Seminole County Lake Management staff, Thomas Calhoun and Joey Cordell, surveyed the aquatic plants in **Spring Lake**.

Two species of submersed aquatic vegetation (SAV) were observed during the inspection: southern naiad and eelgrass. Eelgrass was the dominant SAV and was found to a maximum depth of 3.5 feet. This was a decrease in depth from 4.2 feet in the previous inspection. Southern naiad was found in very small amounts to a maximum depth of 2.5 feet. Access corridors were open and in good shape. No hydrilla was observed during the inspection.

Native emergent vegetation found during the inspection included: pennywort, hempvine, yellow cow lily, fragrant water lily, pickerelweed, duck potato, bulrush, cordgrass, fireflag, cattail, and iris. Many of the shorelines in Spring Lake have little to no emergent aquatic vegetation. Emergent vegetation is important to lake systems as it acts as a filter for nutrient runoff from surrounding yards. Planting native vegetation is an easy and effective way to improve the water quality of the lake. It is also effective at reducing shoreline erosion.

**Photo: Example of shoreline without vegetation.**



A minimal amount of invasive emergent vegetation was found during the inspection. Invasive emergent species observed during the inspection included: alligator weed, wild taro, primrose willow, Chinese tallow, Brazilian pepper tree, and creeping oxeye.

**Photo: The invasive Brazilian pepper tree.**



The water elevation at the time of the inspection was 63.07 feet above sea level. The secchi reading (measurement for water clarity) was 3.9 feet in a total depth of 12.0 feet. Two grass triploid (sterile) carp fish were observed during this inspection. An algae bloom was also present on the south east side of the lake.

**Photo: Algae bloom.**



**4/6/2016**

On **April 6<sup>th</sup> 2016**, Seminole County Lake Management staff, Thomas Calhoun and Joey Cordell, surveyed the aquatic plants in **Spring Lake**.

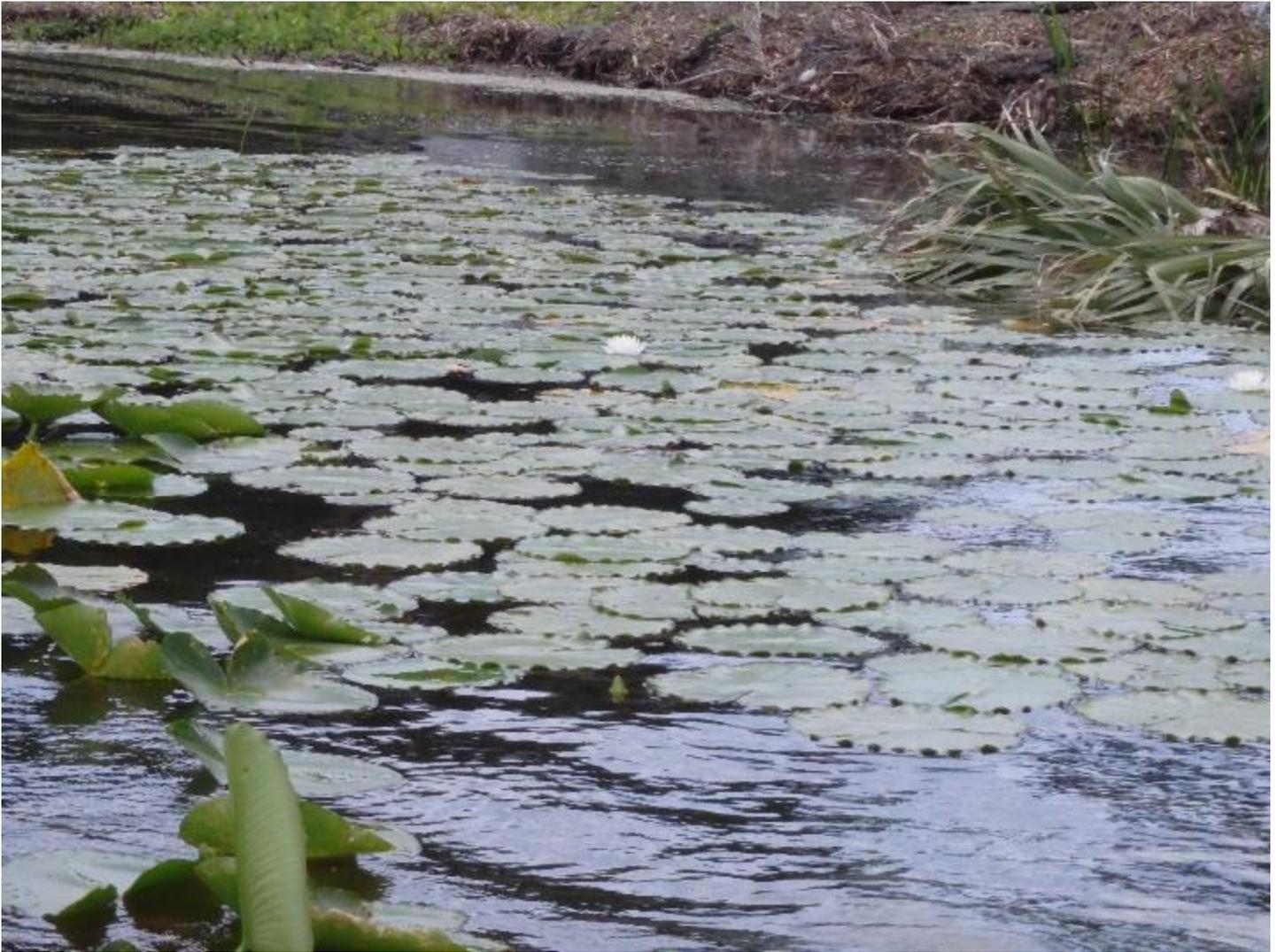
Eelgrass was the dominant SAV and was found to a maximum depth of 4.0 feet; this species was found “topping out” (reaching the surface) in depths less 1.5 feet. This was an increase in depth of 3.5 feet from the previous inspection. Southern naiad was not found during this inspection. Access corridors were open and in good shape. No hydrilla was observed during the inspection.

**Photo: Eelgrass “topping out” along the shoreline.**



Native emergent vegetation found during the inspection included: pennywort, yellow cow lily, fragrant water lily, pickerelweed, duck potato, bulrush, cordgrass, fireflag, cattail, rush-fuirena and iris.

**Photo: Fragrant water lily.**



A minimal amount of invasive emergent vegetation was again found during this inspection; this was a positive effect of the MSBU-funded herbicide maintenance program. Invasive emergent vegetation observed during the inspection included: alligator weed, wild taro, primrose willow, torpedo grass, Chinese tallow, Brazilian pepper tree, and creeping oxeye.

**Photo: Invasive emergent vegetation wild taro.**



The water elevation at the time of the inspection was 63.1 feet above sea level. The secchi reading (measurement for water clarity) was 3.5 feet in a total depth of 8.6 feet. One grass triploid (sterile) carp fish was observed during this inspection.

**6/2/2016**

On **June 2<sup>nd</sup> 2016**, Seminole County Lake Management staff, Thomas Calhoun and Joey Cordell, along with MSBU project coordinator Joe Saucer, surveyed the aquatic plants in **Spring Lake**.

These species were southern naiad and eelgrass. Eelgrass was the dominant SAV and was found to a maximum depth of 4.0 feet. However there was a noted decrease of eelgrass since the previous inspections. Southern naiad was not found during this inspection. Access corridors were open and in good shape. No hydrilla was observed during the inspection.

Native emergent vegetation found during the inspection included: pennywort, yellow cow lily, fragrant water lily, pickerelweed, duck potato, bulrush, cordgrass, fireflag, cattail, rush-fuirena and iris. Many of the shorelines in Spring Lake have little to no emergent aquatic vegetation. Emergent vegetation is important to lake systems as it acts as a filter for nutrient runoff from surrounding yards. Planting native vegetation is an easy and effective way to improve the water quality of the lake. It is also effective at reducing shoreline erosion.

**Photo: Stand of native emergent duck potato and pickerel weed.**



**Photo: Example of shoreline without emergent vegetation.**



Again, a minimal amount of invasive emergent vegetation was found during this inspection. Invasive emergent species observed during the inspection included: alligator weed, wild taro, primrose willow, torpedo grass, Chinese tallow, Brazilian pepper tree, and creeping oxeye.

The water elevation at the time of the inspection was 63.1 feet above sea level. The secchi reading (measurement for water clarity) was 3.5 feet in a total depth of 8.6 feet. One grass triploid (sterile) carp fish was observed during this inspection. All of this information can be found online at Seminole County's Water Atlas website:

<http://www.seminole.wateratlas.usf.edu/lake/waterquality.asp?wbodyid=7521&wbodyatlas=lake>

### **Lake Recommendations:**

1. Work together with other lakefront owners. Have *at least* one annual lake association meeting, invite guest speakers (such as county or state biologists), and discuss lake specific issues, especially nutrients/lake management recommendations. SCLMP staff will be glad to present our findings from this and other surveys. Continue to increase native aquatic plantings along shorelines (such as pickerelweed, duck potato, and canna).
2. Consider increasing street sweeping services during times of peak leaf fall to ensure that this debris does not enter waterways. Leaf debris contains high levels of phosphorous that can negatively impact your lakes.
3. Utilize the valuable educational outreach programs that are available to you: Shoreline Restoration Workshops, Florida Yards and Neighborhoods (FYN) interactive presentations, and Lake Management Video mail-outs. Implement a media campaign within the community to promote the reduction of personal pollution; encourage residents to decrease their overall fertilizer usage, **use only phosphorous-free and slow-release nitrogen**

**fertilizers**, keep a functional shoreline with beneficial native aquatic plants, and keep grass clippings out of your lake and the storm drains that lead to the lake. All of these activities aid in protecting your lake! Contact Seminole County Lake Management Program (407) 665-2439 for more information regarding the free educational programs available.

4. Help spread the word! Obtain email addresses from neighbors not currently on the distribution list so that these reports can be shared with everyone. Valuable information is contained within these bioassessments.